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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,403	01/22/2004	Shashikant Prasad	U 015002-5	4537
140	7590	03/10/2006	EXAMINER	
LADAS & PARRY 26 WEST 61ST STREET NEW YORK, NY 10023			LEPISTO, RYAN A	
			ART UNIT	PAPER NUMBER
			2883	

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/763,403

Applicant(s)

PRASAD ET AL.

Examiner

Ryan Lepisto

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-12, 14, 15 and 17-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7, 10, 11, 15, 18, 19 and 22 is/are rejected.
- 7) ☒ Claim(s) 8, 9, 12, 14, 17, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. **Claims 1, 3, 5-8, 11-12, 14-15 and 17-19** are objected to because of the following informalities: Many of the following objections are unresolved or uncommented on from the last action. Appropriate correction is required.

- With regard to claims 1 and 12: The first semicolon should be deleted in both of these claims.
- With regard to claims 3 and 15: The second line should read – insensitive to micro bend loss and has a dispersion slope less than...–. As the claims read now it seems as if the fiber is insensitive to dispersion slope less than 0.08.
- With regard to claims 5 and 17: The statement that something equals about a value is not proper. A variable equals a value or a variable is about a value, it can't be both. If these claims are not amended to fix this issue, it would become a 35 USC 112, second paragraph rejection.
- With regard to claim 6: On line 2 "it" should be replaced with – the fiber – and should further read – comprising a single annular ring...–.
- With regard to claims 7 and 19: The attenuation value does not have units making it unclear as to the magnitude of attenuation (for example is it dB/km?).
- With regard to claims 3, 7-8, 15 and 19: The period between "nm" and "km" should be deleted.
- With regard to claims 8-9 and 20-21: It is not clear if "a typical" dispersion slope/effective area is referring to a typical prior art dispersion slope/effective

area or a typical value of dispersion slope/effective area over some range of wavelength of the claimed fiber. The language should be cleared up to avoid indefiniteness.

- With regard to claims 11-12, 14 and 17: This claim states that reference (4) is both an outer cladding region (from the limitations in claims 11-12, 14 and 17) and an outer glass region (from the limitations in claim 1). It is not clear if this is the same layer.
- With regard to claim 18: The same issue arises from above wherein reference numerals 2 and 4 are used now for annular rings.
- With regard to claim 14: The ring core is stated to be between only the inner cladding and nothing else. The ring core has to be between two layers. It is believed that line 3 of this claim should read —...said inner cladding 2 and said *outer cladding (4)*...—. The last action mistakenly suggested the ring core between the inner cladding and ring core instead of between inner cladding and outer cladding.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. **Claims 1-3, 5-7, 10-11, 15, 18-19 and 22** are rejected under 35 U.S.C. 102(a) as being anticipated by **Changdar et al (WO 02/088803 A2)** (Changdar). Changdar teaches a dispersion optimized fiber for low dispersion, low micro-bending loss and optimized effective area in the C and L band transmissions (page 1 lines 7-14) (Fig. 2a) comprising (from the center to the outer layer in order) a center core region (1), an inner cladding region (2 with 3) of germanium and fluorine doped material (page 12 lines 3-5), a ring core region (4) and a outer glass region (5) wherein the refractive indices of the regions (1-5, respectively) have the relationship $n_1 > n_4 > n_5 > (n_2 \text{ and } n_3)$ (page 9 lines 9-13), a dispersion slope less than $0.08 \text{ ps/nm}^2\text{km}$ (0.05 or less, page 12 line 15), radiuses of each layer (center core, cladding and ring core, respectively) about 2.7, 6.3 and $8.8 \text{ }\mu\text{m}$ (2.8, 6.3 and $9.2 \text{ }\mu\text{m}$, page 10 lines 6-9) since the term "about" is not defined in the specification, within $1 \text{ }\mu\text{m}$ is considered "about", attenuation less than 0.22 (page 12 line 12), dispersion at 1530 to 1565 nm is 2.2 to $6.0 \text{ ps/nm}^2\text{km}$ (2.5 to $6.0 \text{ ps/nm}^2\text{km}$, page 12 line 13), dispersion at 1565 to 1625 nm is 4.0 to $11 \text{ ps/nm}^2\text{km}$ (3.9 to $8.6 \text{ ps/nm}^2\text{km}$, page 12 line 14), micro-bending less than 0.05 dB (page 12 line 21), macro-bending less than 0.5 (page 12 line 22).

Prior art which teaches a range within, overlapping, or touching the claimed range anticipates if the prior art range discloses the claimed range with sufficient specificity. When the prior art discloses a range which touches, overlaps or is within the claimed range, but no specific examples falling within the claimed range are disclosed, a case by case determination must be made as to anticipation. In order to anticipate the claims, the claimed subject matter must be disclosed in the reference with "sufficient specificity to constitute an anticipation under the statute." What constitutes a "sufficient specificity" is fact dependent. If the claims are directed to a narrow range, the reference teaches a broad range, and there is evidence of unexpected results within the claimed narrow range, depending on the other facts of the case, it may be reasonable to conclude that the narrow range is not disclosed with "sufficient specificity" to constitute an anticipation of the claims. The unexpected results may also render the claims unobvious. The question of "sufficient specificity" is similar to that of "clearly envisaging" a species from a generic teaching. See MPEP § 2131.02.

Allowable Subject Matter

3. **Claims 8-9, 12, 14, 17 and 20-21** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

These claims would be allowable over the prior art of record if rewritten in independent form including all of the limitations of the base claim and any intervening claims

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because the latter, either alone or in combination, does not disclose nor render obvious a dispersion optimized fiber with the dispersion slope, polarization mode dispersion and mode field diameter in the ranges of claims 8 and 20 or a cable cut off wavelength, core concentricity and effective area of claims 9 and 21 or inner cladding region with a refractive index equal to an outer cladding region and the other refractive indices relationships given in claim 12 or a fiber with the ring core surrounded with an outer cladding that is surrounded by an outer glass region or a fiber with the radii claimed in claim 17, in combination with the rest of the claimed limitations.

Response to Arguments

4. Applicant's arguments with respect to claim rejections have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Lepisto whose telephone number is (571) 272-1946. The examiner can normally be reached on M-F 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ryan Lepisto

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Date: 2/28/06



Frank Font

Supervisory Patent Examiner

Technology Center 2800